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EXAMINER

BATES, KEVIN T

ART UNIT	PAPER NUMBER
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2456

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 09/723,480	Applicant(s) MCDYSAN ET AL.	
	Examiner KEVIN BATES	Art Unit 2456	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

This Office Action is in response to a communication made on May 28, 2010.

Claims 1-40 are pending in this application.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 recites

an access router, wherein responsive to the control message, the programmable access device establishes the configuration specified by the control message and communicates a the first subset of the received messages to the external processor for service processing in accordance with the configuration, and forwards the second subset of the received messages not communicated to the external processor to the access router for routing, via a second network interface different from the first network interface, to a second network external to the network access system, wherein the second network is different from the first network.

It is unclear from this claim by its language which functions are preformed by which network element. For example, it requires the functionality of establishes, communicating, forwarding, etc. but those functions can be read as being preformed by the programmable access device, but also it can be argued that those functions are being performed by the access router. As result, based on the wording, claim 21 is not

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clear and definite. For the purpose of further prosecution the examiner has interpreted the programmable access device as performing the functionality, while the access router only routes the subset of packets to a second external network.

Claims 22-39 are also indefinite because they contain the same limitations as claim 21.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 7-9, 12-13, 17, 20-24, 27-28, 31-32, 36, and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert (6606316) in view of Gai (6167445).

Regarding claims 1 and 21, Albert teaches a method of communication in, a network access system including an external processor and a programmable access device (Figure 2A, where the PAD is the forwarding agent and the external processor is the service manager), said method comprising:

receiving a control message from the external processor to the programmable access device to establish a configuration of the programmable access device (Column 6, lines 40 – 46);

receiving, by the programmable access device, messages from a first network external to the network access system via a first network interface (Column 6, lines 24 – 27);

processing, by the programmable access device, the messages from the first network to distinguish between various message types and to establish a first subset of the received messages and a second subset of the received messages (Column 6, lines 46 – 50; Column 9, lines 14 – 20);

communicating a first subset of the received messages from the programmable access device to the external processor for service processing in accordance with the configuration (Column 6, lines 46 – 50; Column 9, lines 14 – 20); and

routing a second subset of the received messages not communicated to the external processor from the network access system via a second network interface different from the first network interface to a second network external to the first network access system, wherein the second network is different from the first network (Column 6, lines 44 – 48).

Albert teaches that the programmable access device and external process are providing network service between a network and physical services (Col. 2, lines 20 – 37). Albert does not explicitly indicate that the second subset of packets are transmitted from the programmable access device through another access router to the second external network.

Gai '445 teaches a system with intermediate device for maintaining network services, packet classification, packet filtering, and other policy implementation like the forwarding agents in Albert (Col. 12, lines 19 - 67) where those devices forward subsets of packets into other access routers in the internal network. See Fig 3, where the intermediate device 318, accepts traffic from an external network 304 and forwards packets onto other access routers such as 312.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to expand Albert's system instead of just operating as a forwarding agent for host servers it can operate to provide services and forwarding functions for an entire network including other routers to allow a more diverse implementation of the system.

Regarding claim 40, Albert teaches a distributed router comprising:

a first network interface through which packets are communicated with a first network (Figure 2B, element 260);

a second network interface different from the first network interface through which packets are communicated with a second network different from the first network (Figure 2B element 258);

a programmable access device configured to input messages from the first network via the first network interface (Column 6, lines 24 – 27); and

an external processor configured to receive, from the programmable access device, a first portion of the input messages and to transmit a control message to the

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programmable access device specifying a configuration to control the selection of the first subset (Column 6, lines 46 – 50; Column 9, lines 14 – 20),

wherein the programmable access device forwards a second portion of the input messages not received by the external processor for routing via the second network interface to the second network (Column 6, lines 44 – 48).

Albert teaches that the programmable access device and external process are providing network service between a network and physical services (Col. 2, lines 20 – 37). Albert does not explicitly indicate that the second subset of packets are transmitted from the programmable access device through another access router to the second external network.

Gai '445 teaches a system with intermediate device for maintaining network services, packet classification, packet filtering, and other policy implementation like the forwarding agents in Albert (Col. 12, lines 19 - 67) where those devices forward subsets of packets into other access routers in the internal network. See Fig 3, where the intermediate device 318, accepts traffic from an external network 304 and forwards packets onto other access routers such as 312.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to expand Albert's system instead of just operating as a forwarding agent for host servers it can operate to provide services and forwarding functions for an entire network including other routers to allow a more diverse implementation of the system.

Regarding claim 2 and 22, Albert teaches that transmitting a control message comprises transmitting a filter control message to establish a configuration of a packet header filter in the programmable access device (Column 8, lines 62 – 65); and communicating messages comprises communicating network messages filtered from a packet flow by the packet header filter of the programmable access device (Column 12, lines 48 – 62).

Regarding claim 3 and 23, Albert discloses limiting communication of network messages from the programmable access device to the external processor by sending the programmable access device a message setting message interface flags in the programmable access device (Figure 12A and 12B).

Regarding claims 4 and 24, Albert teaches transmitting a control message comprises transmitting a monitor control message to establish a configuration of a monitor in the programmable access device; and communicating messages comprises communicating reporting messages from the programmable access device to the external processor in response to the configuration of the monitor (Column 6, lines 40 – 53).

Regarding claim 7 and 27, Albert teaches transmitting a control message comprises transmitting a policer control message to establish a configuration of a policer in the programmable access device (Column 6, lines 40 – 53).

Regarding claims 8 and 28, Albert teaches transmitting a control message comprises transmitting a forwarding table control message to establish a configuration of a forwarding table in the programmable access device (Column 12, lines 48 – 62).

Regarding claim 9, Albert teaches establishing a configuration of a forwarding table comprises establishing a new forwarding table in the programmable access device (Column 8, lines 62 – 65).

Regarding claim 12 and 31, Albert teaches teaches transmitting a control message from the external processor to the programmable access device to establish a configuration of the programmable access device comprises transmitting a control message specifying a source from which packets are not to be accepted; and the method further comprises dropping packets from the specified source by the programmable access device (Column 9, lines 14 – 16).

Regarding claim 13 and 32, Albert teaches indicate that in response to service processing by the external processor, injecting a packet from the external processor into packet flow through the programmable access device (Column 9, lines 21 – 28).

Regarding claim 17 and 36, Albert teaches the method of claims 1 and 21, wherein receiving a control message comprises accessing a control processor on the external processor via an application programming interface (Column 10, lines 1 – 4).

Regarding claims 20 and 39, Albert teaches transmitting a control message comprises transmitting a control message via an intermediate communication network (Column 9, lines 36 – 47).

Claims 5 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert in view of Gai '455, and in further view of Haas (5115432).

Regarding claim 5 and 25, Albert teaches the method of claims 1 and 21.

Albert does not explicitly indicate transmitting a monitor control message comprises transmitting a control message to establish a threshold number of allowed retransmissions.

Haas teaches that an access device's configured policy should include a retransmissions policy (Column 7, lines 45 – Column 8, line 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Haas' teachings of a retransmission policy on Albert's network node reconfiguration system in order to give the network management a tool to help reduce congestion in the system and obtain optimal performance (Column 7, lines 58 – 61).

Claims 16, 18, 35, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert in view of Gai '455, and in further view of Feldman (6055561).

Regarding claims 16, 18, 35, and 37, Albert teaches the method of claims 1 and 21.

Albert does not explicitly indicate exchanging keepalive and acknowledgment messages between the external processor and the programmable access device.

Feldman discloses a network system with network nodes and teaches acknowledgement and keepalive messages are communicated between the nodes (Figure 5; Column 9, line 65 – Column 10, line 11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Feldman's teaching of keepalive messages and

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acknowledgements in Albert's system in order to know that the communication paths are still open and the communications are being received (Column 9, line 65 – Column 10, line 11).

Claims 19 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert in view of Gai '455, and in further view of Grant (5027269).

Regarding claims 19 and 38, Albert teaches the method of claims 1 and 21.

Albert does not explicitly indicate that in response to failure of a service controller servicing the session in the external processor.

Grant discloses a system for failure recovery where in the detection of failure in a system where data is lost (Column 4, lines 42 – 51) sending a request for state of a session information (Column 4, line 67 – Column 5, line 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Grant's teaching in Albert in order to allow the external processor to recover the data that was lost as result of a fault (Column 2, lines 46 – 65).

Claims 10-11 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert in view of Gai '455, and in further view of Gai (6651096).

Regarding claim 10 and 29, Cohen teaches the method of claims 1 and 21.

Albert does not explicitly indicate transmitting a control message comprises transmitting a control message to establish a configuration of a scheduler and one or more associated output buffers in the programmable access device.

Gai '096 discloses a system for controlling the configuration of an access device that includes making configuration changes to a scheduler and has one or more output queues (Column 6, lines 19 – 28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching of configuration a scheduler on an access device in Albert's system in order to ensure QoS treatments for data flows (Column 6, lines 18 – 21).

Regarding claim 11 and 30, Albert teaches the method of claims 1 and 21.

Albert does not explicitly indicate transmitting a control message comprises transmitting a shaper control message to establish a configuration of a shaper in the programmable access device.

Gai '096 discloses transmitting a control message comprises transmitting a shaper control message to establish a configuration of a shaper in the programmable access device (Gai, Column 6, lines 19 – 30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching of configuration a scheduler on an access device in Albert's system in order to ensure QoS treatments for data flows (Column 6, lines 18 – 21).

Claims 6, 14-15, 26, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert in view of Gai '455, and in further view of Gibson (6680943).

Regarding claim 6 and 26, Albert teaches the method of claims 4 and 24.

Albert does not explicitly indicate transmitting a monitor control message comprises transmitting a threshold activity level.

Gibson teaches a network node remotely configured that includes configuring a session to have a guaranteed quality of service, which gives a minimum threshold of activity to a connection session (Column 9, lines 32 – 37).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gibson's teachings on Albert's system in order provide users with guaranteed service, especially for applications such as video and voice.

Regarding claim 14 and 33, Albert teaches the method of claims 1 and 21.

Albert does not explicitly indicate transmitting a control message from the external processor to the programmable access device to establish a configuration of the programmable access device comprises transmitting a session deletion control message; and the method further comprises the programmable access device deleting a session specified by the session deletion control message

Gibson discloses transmitting a control message from the external processor to the programmable access device to establish a configuration of the programmable access device comprises transmitting a session deletion control message; and the method further comprises the programmable access device deleting a session specified by the session deletion control message because it discloses starting a session (INVITE) and deleting (tearing down or cancelling) a session (BYE and CANCEL) where these messages go from the control node to the access device (Gibson, Figure 3, Column 12, lines 7 – 14; Column 12, line 65 – Column 13, line 17).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gibson's teachings on Albert's system in order provide users with guaranteed service, especially for applications such as video and voice.

Regarding claim 15 and 34, Albert teaches the method of claims 1 and 21.

Albert does not explicitly indicate that the external processor signals network hardware to establish a network connection in response to receipt of a message from the programmable access device

Gibson discloses the external processor signaling network hardware to establish a network connection in response to receipt of a message from the programmable access device (Gibson, Column 9, lines 32 – 40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gibson's teachings on Albert's system in order provide users with guaranteed service, especially for applications such as video and voice.

Response to Arguments

Applicant's arguments with respect to claims 1-40 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN BATES whose telephone number is (571)272-3980. The examiner can normally be reached on M-F 8 am - 5 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571) 272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KEVIN BATES/

Primary Examiner, Art Unit 2456